AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ceramic composite material comprising:

~~containing~~ a ceramic substrate material;

at least one biological material; and

at least one nanoparticulate reinforcing material,

~~characterized in that~~

wherein the at least one biological material, and the at least one nanoparticulate reinforcing material are homogenously embedded in the ceramic substrate material, and the at least one nanoparticulate reinforcing material comprises inorganic nanoparticles that are linked to one another, and are formed from a nanoparticulate sol, and cross-links the substrate material.

2. (Currently Amended) The composite material according to claim 1, wherein the at least one nanoparticulate reinforcing material comprises nanoparticulate oxides of elements of the II to V main or subgroup of the periodic table, or ~~the~~ mixtures thereof.

3. (Currently Amended) The composite material according to claim 2, wherein the at least one nanoparticulate reinforcing material comprises nanoparticulate hydrolysis products of trialkoxy silanes, or ~~the~~ mixtures thereof.

4. (Currently Amended) The composite material according to ~~one of the preceding claims~~claim 1, wherein ~~the~~ a proportion of the at least one nanoparticulate reinforcing material is up to 70 percent by weight.

5. (Currently Amended) The composite material according to ~~one of the preceding claims~~claim 1, wherein the at least one nanoparticulate reinforcing material comprises nanoparticles with a mean particle diameter smaller than 200 nm.

6. (Currently Amended) The composite material according to ~~one of the preceding claims~~claim 1, wherein the at least one biological material comprises biological cells, cell groups, cell components, or biologically effective macromolecules.

7. (Currently Amended) The composite material according to claim 6, wherein the at least one biological material comprises living or viable organisms.

8. (Currently Amended) The composite material according to claim 7, wherein the at least one biological material comprises bacteria, fungi, spores of bacteria or fungi, protozoans, algae, animal cells, vegetable cells, animal cell groups, or vegetable cell groups.

9. (Currently Amended) The composite material according to claims 7 ~~or 8~~, wherein ~~the~~ a proportion of the living or viable organisms is 0.1 to 30 wt.-% based on ~~the~~ a dry weight of the composite material.

10. (Currently Amended) The composite material according to ~~one of the preceding claims~~claim 1, wherein the ceramic substrate material comprises aluminum oxide or alumosilicate.

11. (Currently Amended) The composite material according to ~~one of the preceding claims~~claim 1, wherein at least one additive for increasing ~~the~~ a biological activity, and/or at least one water soluble polymer is/are embedded in the ceramic substrate material.

12. (Currently Amended) The composite material according to claim 11, wherein the at least one additive for increasing the biological activity comprises polyols, glycerol, and/or nutrients.

13. (Original) The composite material according to claim 11, wherein the at least one water soluble polymer comprises polyvinyl alcohol or polyacrylic acid.

14. (Currently Amended) The composite material according to ~~one of the~~ claims 11 ~~to 13~~, wherein ~~the~~ a proportion of the at least one additive embedded ~~additives~~ in the ceramic substrate material is up to 30 wt.-% based on ~~the~~ a dry weight of the composite material.

15. (Currently Amended) A method for the production of a ceramic composite material according to ~~one of the preceding claims with~~claim 1, comprising the following steps:

[[-]] producing a slurry ~~made up of~~comprising an aqueous dispersion of the ceramic substrate material and a dispersion of the at least one~~dispersed~~ biological material,

[[-]] adding to the slurry an inorganic nanosol capable of gelling~~adding the nanoparticulate reinforcing material~~,

[[-]] reinforcing the ceramic composite material by ~~means of~~ neutralization of the slurry with the at least one nanoparticulate reinforcing material at room temperature, or by ~~means of~~ a freezing process so that the composite material is formed, and

[[-]] final drying of the ceramic composite material.

16. (Currently Amended) The method according to claim 15, wherein aluminum oxide or alumosilicate powder or fibers are added to the slurry as the ceramic substrate material.

17. (Currently Amended) The method according to claim 15 ~~or 16~~, wherein additional additives are added to the slurry for improving ~~the~~ biological activity and increasing ~~the~~

mechanical stability.

18. (Currently Amended) The method according to ~~one of the~~ claims 15~~ to 17~~, wherein the reinforcing is carried out in a mold.

19. (Currently Amended) The method according to ~~one of the~~ claims 15~~ to 18~~, wherein the freezing process comprises a freeze-treatment of the ceramic composite material at a temperature of up to -80 °C.

20. (Currently Amended) The method according to claim ~~19~~15, wherein the ~~freeze-~~drying of the ceramic composite material ~~occurs~~ comprises freeze-drying at a temperature below ~~the~~ a freezing point of water at up to -10 °C.

21. (Currently Amended) A method for the treatment of fluids, said method comprising :

providing a~~Use of a composite material according to one of the claims 1 to 14 as a~~ biocatalyst or biofilter comprising a ceramic composite material according to claim 1; and

contacting the biocatalyst or biofilter with the fluids to~~for the~~ treat~~ment of~~ the fluids.

22. (Currently Amended) A method for producing ceramic materials, said method comprising providing a ceramic~~Use of a~~ composite material according to ~~one of the claims 1 to 14 for the production of ceramic materials~~claim 1.

23. (New) The composite material according to claim 1, wherein the composite material is a molding.

24. (New) A molding produced from the composite material of claim 1.

25. (New) The method according to claim 15, wherein the reinforcing comprises a freezing process.

26. (New) The method according to claim 15, wherein the reinforcing comprises neutralization of the slurry with the inorganic nanosol at room temperature.